

## ABSTRACT

5 The present invention relates to an apparatus for  
creating a pattern on a workpiece sensitive to radiation,  
such as a photomask, a display panel or a microoptical  
device. The apparatus comprises a radiation source and a  
spatial modulator (SLM) having a multitude of modulating  
elements (pixels). It further comprises an electronic  
data processing and delivery system feeding drive signals  
10 to the modulator, a precision mechanical system for  
moving said workpiece and an electronic control system  
coordinating the movement of the workpiece, the feeding  
of the signals to the modulator and the intensity of the  
radiation, so that said pattern is stitched together from  
15 the partial images created by the sequence of partial  
patterns. According to the invention the drive signals  
can set a modulating element to a number of states larger  
than two.

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